

Summary

An Optical transmission system (10) is presented that comprises at least one transmitter (12), at least one transmission line (14), at least one optical fiber amplifier (18), and at least one receiver (21), the optical fiber amplifier (18) being designed to show a flat characteristic of output power versus wavelength. The optical fiber amplifier (18) is designed to show the flat output characteristic in response to a flat characteristic of a first input power level versus wavelength. At least one coupler (28) for coupling at least one Raman amplifier (30) to the optical transmission system (10) is provided, the Raman amplifier (30) having a Raman gain that is tilted in a direction opposite to a tilt of the optical fiber amplifier (18) that would occur in response to a flat characteristic of a second input power level versus wavelength. Thereby, an optical transmission system (10) is presented that can be upgraded to improve OSNR while maintaining a flat output characteristic.